

0500/0280



OIEP

#2.

## RAW SEQUENCE LISTING

PATENT APPLICATION: US/10/053,291

DATE: 02/06/2002

TIME: 09:32:54

Input Set : N:\Crf3\RULE60\10053291.raw

Output Set: N:\CRF3\02062002\J053291.raw

1 <110> APPLICANT: Stuhlmann, Heidi  
 2 Xiong, Jing-Wei  
 3 Taubman, Mark B.  
 4 <120> TITLE OF INVENTION: VASCULAR ENDOTHELIAL ZINC FINGER 1 GENE  
 5 AND PROTEIN AND USES THEREOF  
 6 <130> FILE REFERENCE: 31200  
 8 <140> CURRENT APPLICATION NUMBER: 10/053,291  
 9 <141> CURRENT FILING DATE: 2002-01-17  
 11 <150> PRIOR APPLICATION NUMBER: US/09/083,290A  
 12 <151> PRIOR FILING DATE: 1998-05-22  
 15 <160> NUMBER OF SEQ ID NOS: 13  
 16 <170> SOFTWARE: FastSEQ for Windows Version 3.0  
 18 <210> SEQ ID NO: 1  
 19 <211> LENGTH: 3645  
 20 <212> TYPE: DNA  
 21 <213> ORGANISM: Mus musculus  
 22 <400> SEQUENCE: 1

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24	ttcctgttcc	aggcccacga	agcatcccat	caccaacagc	aggcagcgca	gaacagcttg	120
25	ctgccctcc	tgagttctgc	tgtggagccc	cctgatcaga	aaccgttgct	tccaatacca	180
26	attactcaga	aacctcaggg	tgccaccagaa	acattaaagg	atgccattgg	gattaaaaaa	240
27	gaaaaaccca	aaacttcggt	tgtgtgcact	tactgcagta	aagcattcag	ggacagctat	300
28	cacctgaggg	gccatcagtc	ctgccacaca	gggatcaagt	tgggtgtctg	ggcaaaagaaa	360
29	acccccacca	cggtggttcc	ccttatctcc	accattgctg	gggacagcag	ccgaacttcg	420
30	ttgggttcaa	ctattgcagg	catcttgtea	acagtcacta	catcttccct	gggcaccaac	480
31	cccagcagca	gcgctagtag	cacagcaatg	cctgtgcccc	agtctgtcaa	gaaacccagt	540
32	aagcctgtca	agaagaacca	cgctgtgag	atgtgtggga	aggccttccg	ggatgtgtac	600
33	cacctcaatc	ggcacaagct	ctcccattcg	gacgaaaagc	cctttgagtg	tcctatttgt	660
34	aatcagcgct	tcaagaggaa	ggaccggatg	acttaccatg	tgaggtctca	tgaaggaggc	720
35	atcaccaaac	cctatacttg	cagtggttgt	gggaaaggct	tctcaaggcc	tgaccaccta	780
36	agctgtcatg	taaaacatgt	gcattcaaca	gaaagaccct	tcaaatgcc	aacgtgcact	840
37	gctgcctttg	ccaccaaaga	cagactacgg	acacacatgg	tgcgccacga	aggcaaggta	900
38	tcatgtaaca	tctgtgggaa	gctcttgagt	gcagcatata	tcaccagcca	cttaaagaca	960
39	catgggcaga	gccaagatat	caactgtaac	acgtgcaaac	aaggcatcag	caaaacgtgc	1020
40	atgagtgagg	agaccagcaa	tcagaagcag	cagcagcagc	agcagcaaca	gcagcagcag	1080
41	caacaacaac	caacatgtgac	aagctggcca	gggaagcagg	tagagacact	agcactgtgg	1140
42	gaagaagctg	tcaaagcaag	aaagaaagaa	gctgccaaac	tgtgccaaac	ctccacggct	1200
43	gctacgacac	cagtgactct	cactactcca	ttcaatataa	cgtcctctgt	gtcgtctggg	1260
44	actatgtcaa	acccagtcac	agtggcagct	gcaatgagca	tgagaagtcc	agtaaatgtc	1320
45	tcaagtgcag	ttaacataac	cagcccctta	gccatgacct	cacctttaac	actcaccacc	1380
46	ccagtcaacc	tcccaccccc	tgtgaccggc	ccagtgaaata	tagcacaccc	tgccaccatc	1440
47	acatctccaa	tgaacctgcc	cactcctatg	acattagctg	cccctctcaa	tatagcaatg	1500
48	aggcctgtag	aaagtatgcc	tttcttgccc	caagctttgc	ctacgtcacc	gccttggtaa	1560

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49  acagttattat aagtcacaaat tgggtttaaag taaatattta ccagcaactt aaccttagtt 1620
50  gattaaagca aaaagcagac tatgaaattg ggaggtttta ttatgttagt taataagagt 1680
51  gtagtagctc caatttttct ggggttggtc aaagtagggt atagtgttaa cttatcactg 1740
52  gaccacttta gtttactcag aaacccttt agctgacacc atgcttaaa caggatagta 1800
53  gctggcaaga cgaatgccca gaattaaaac caatcataaa acccatttca aaataaaaaa 1860
54  gcattatttg tttttattat ttttttaaat acaacagaat ctttttattg taaacactag 1920
55  cagagttctt cctctgtac aaggtggacg gttttaacct ggagctcaag cccacagact 1980
56  gagagctagt gtagcattgt ctgtggtttt gctcgtatga gtgaacagag gcattgtcat 2040
57  aataaaatgc atttcagaga atatgcattt tacctttggg aatagttaa ttccaggcag 2100
58  cattccctat gggaaagggt ataccagctc tgatatgcaa agcatatgat aatttatcat 2160
59  tctaacttca acatataata gggattgtga cctgatattt ggagatgtaa atattgctca 2220
60  gcatattaat cctgatgga atatagcatt gtagttgact ttttaaaaaa aaaaaaacaa 2280
61  aaaaaaaatc aaggaattcc gagagctgtc actgcctttg aatgctatcc ctgggatagg 2340
62  ggtggcttca gaaccacagga agtggccaag gggcacagac tctgctggag gcctgagccg 2400
63  ggggttccat aggagactga caggagacat tttgccttag gccacaaaaa gaagaaggct 2460
64  accccactta cagatgcaga ccatgtgggg ctcggagaa ctgctttag catggtttct 2520
65  agtggtggca gcagatgta ctactgagca tgtctacaga cccagtcgta gagtgtgtac 2580
66  tgtggggatt tccggagggt ccatctcgga gacctttgtg cagcgtgtat accagcctta 2640
67  cctcaccact tgcgacggac acagagcctg cagcacctac cgaacctct accgactgc 2700
68  ctatcgccgt agccctgggg tgactccgc aaggcctcgc tatgcttgc gccctgggtg 2760
69  gaagaggacc agtgggctcc ctggggcttg tggagcagca atatgcagc ctccagtgg 2820
70  gaatggagg agttcatccg cccaggacac tgccgctgcc ctgtggatgg cagggagata 2880
71  ctgtccagac agatgttgat gaatgcagta caggagaggc cagtgtccc cagcgtgtg 2940
72  tcaatactgt gggaagttac tggtgccagg gatgggaggg acaaagccca tctgcagatg 3000
73  ggacccctg cctgtctaag gaggggccc cccctttccc cccaaacccc acagcaggag 3060
74  tggacagcat ggcgagagag gaggtgtaca ggctgcaggc tcgggttgat gtgctagaac 3120
75  agaaactgca gttggtgctg gccccactgc acagcctggc ctctcggtcc acagagcatg 3180
76  ggctacaaga tctggcagc ctgctggtgt ccttcttgga ggaacatctg ggttccctgtg 3240
77  agtccacaa gacaccact caccacagag gagcctaggg gacctatggg gtggacacca 3300
78  gggctgggtg gatggaactt cttctgggt gggcagattt gcaagttac accctttttc 3360
79  ctctcctgcc ctaggctcct gcaaaaaaga tctgtgataa cctctacca ccaggctgga 3420
80  tagagcagta tccagatccc ttgtagccag agttcaggga cgtgtctggt tgggtcctat 3480
81  gagcagaagc cctgcctcat tgtccctctt tcttaggagg ttctaggac ttgggtatgg 3540
82  ggagtgggtt ctgtgtgac tcttcagtgg ggtccctgt ctaagtggta aggtggggat 3600
83  tgtctccatc tttgtcataa taaagctgag acttgaaaaa aaaaa 3645
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86 <211> LENGTH: 506
87 <212> TYPE: PRT
88 <213> ORGANISM: Mus musculus
89 <400> SEQUENCE: 2
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92  His His Gln Gln Gln Ala Ala Gln Asn Ser Leu Leu Pro Leu Leu Ser
93      20             25             30
94  Ser Ala Val Glu Pro Pro Asp Gln Lys Pro Leu Leu Pro Ile Pro Ile
95      35             40             45
96  Thr Gln Lys Pro Gln Ala Ala Pro Glu Thr Leu Lys Asp Ala Ile Gly
97      50             55             60
98  Ile Lys Lys Glu Lys Pro Lys Thr Ser Phe Val Cys Thr Tyr Cys Ser

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99	65	70	75	80
100	Lys Ala Phe Arg Asp Ser Tyr His Leu Arg Arg His Gln Ser Cys His			
101		85	90	95
102	Thr Gly Ile Lys Leu Val Ser Arg Ala Lys Lys Thr Pro Thr Val			
103		100	105	110
104	Val Pro Leu Ile Ser Thr Ile Ala Gly Asp Ser Ser Arg Thr Ser Leu			
105		115	120	125
106	Val Ser Thr Ile Ala Gly Ile Leu Ser Thr Val Thr Thr Ser Ser Ser			
107		130	135	140
108	Gly Thr Asn Pro Ser Ser Ser Ala Ser Thr Thr Ala Met Pro Val Pro			
109		145	150	155
110	Gln Ser Val Lys Lys Pro Ser Lys Pro Val Lys Lys Asn His Ala Cys			
111		165	170	175
112	Glu Met Cys Gly Lys Ala Phe Arg Asp Val Tyr His Leu Asn Arg His			
113		180	185	190
114	Lys Leu Ser His Ser Asp Glu Lys Pro Phe Glu Cys Pro Ile Cys Asn			
115		195	200	205
116	Gln Arg Phe Lys Arg Lys Asp Arg Met Thr Tyr His Val Arg Ser His			
117		210	215	220
118	Glu Gly Gly Ile Thr Lys Pro Tyr Thr Cys Ser Val Cys Gly Lys Gly			
119		225	230	235
120	Phe Ser Arg Pro Asp His Leu Ser Cys His Val Lys His Val His Ser			
121		245	250	255
122	Thr Glu Arg Pro Phe Lys Cys Gln Thr Cys Thr Ala Ala Phe Ala Thr			
123		260	265	270
124	Lys Asp Arg Leu Arg Thr His Met Val Arg His Glu Gly Lys Val Ser			
125		275	280	285
126	Cys Asn Ile Cys Gly Lys Leu Leu Ser Ala Ala Tyr Ile Thr Ser His			
127		290	295	300
128	Leu Lys Thr His Gly Gln Ser Gln Ser Ile Asn Cys Asn Thr Cys Lys			
129		305	310	315
130	Gln Gly Ile Ser Lys Thr Cys Met Ser Glu Glu Thr Ser Asn Gln Lys			
131		325	330	335
132	Gln Gln Gln Gln Gln Gln Gln Gln Gln Gln Gln Gln Gln Gln His			
133		340	345	350
134	Val Thr Ser Trp Pro Gly Lys Gln Val Glu Thr Leu Arg Leu Trp Glu			
135		355	360	365
136	Glu Ala Val Lys Ala Arg Lys Lys Glu Ala Ala Asn Leu Cys Gln Thr			
137		370	375	380
138	Ser Thr Ala Ala Thr Thr Pro Val Thr Leu Thr Thr Pro Phe Asn Ile			
139		385	390	395
140	Thr Ser Ser Val Ser Ser Gly Thr Met Ser Asn Pro Val Thr Val Ala			
141		405	410	415
142	Ala Ala Met Ser Met Arg Ser Pro Val Asn Val Ser Ser Ala Val Asn			
143		420	425	430
144	Ile Thr Ser Pro Leu Ala Met Thr Ser Pro Leu Thr Leu Thr Thr Pro			
145		435	440	445
146	Val Asn Leu Pro Thr Pro Val Thr Ala Pro Val Asn Ile Ala His Pro			
147		450	455	460

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148      Val Thr Ile Thr Ser Pro Met Asn Leu Pro Thr Pro Met Thr Leu Ala
149      465                               470                               475                               480
150      Ala Pro Leu Asn Ile Ala Met Arg Pro Val Glu Ser Met Pro Phe Leu
151                               485                               490                               495
152      Pro Gln Ala Leu Pro Thr Ser Pro Pro Trp
153      500                               505

155 <210> SEQ ID NO: 3
156 <211> LENGTH: 2306
157 <212> TYPE: DNA
158 <213> ORGANISM: Homo sapiens
159 <400> SEQUENCE: 3
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162      tgtgccccct cctgagctct gccgtggagc cccctgatca gaaaccattg ctccaatac      180
163      caataactca gaaacctcag ggtgcaccag aaacattaaa ggatgccatt gggattaaaa      240
164      aagaaaaacc caaaacttca ttgtgtgca cttactgcag taaagctttc agggacagct      300
165      atcacctgag gcgcacagaa tcctgccaca cagggatcaa gttggtgtcc cggccaaaga      360
166      aaacccccac cacggtggtt ccccttatct ctaccatcgc tggggacagc agccgaactt      420
167      cgttggtctc gaccattgca ggcattctgt caacagtcac tacatcttcc tcgggcacca      480
168      accccagtag cagtgcacgc accacagcta tgccagtgc ccagtctgtc aagaaaccca      540
169      gtaagcctgt caagaagaac catgcttgtg agatgtgtgg gaaggccttc cgagatgtgt      600
170      accatctcaa tcgacacaag ctctcccatc catgatgaaa accctttgag tgtcctattt      660
171      gtaatcagcg cttaagaggg aaggaccgga tgacttacca tgtgaggtct catgaaggag      720
172      gcatcaccaa accctatact tgcagtgttt gtgggaaagg cttctcaagg cctgaccact      780
173      taagctgtca tgtaaaacat gtocattcaa cagaaagacc cttcaaatgc caaacgtgca      840
174      ctgctgcctt tgccacaaaa gacagactgc ggacacacat ggtgcgccat gaaggcaagg      900
175      tatcatgtaa cttcaaggaag aaagaagctg ctaacctgtg ccaaacctcc acggtgcta      960
176      ctcatgggca gagccaaagt atcaactgta atacatgtaa acaaggcatc agtaaaacat      1020
177      gcatgagtga agagaccagt aacccaaaagc agcagcagca gcagcagcag caacaacaac      1080
178      aacaacaaca tgtgacaagc tgccacagga agcaagtaga aacactcaga ctgtgggaag      1140
179      aagctgttaa agcaagggaag aaagaagctg ctaacctgtg ccaaacctcc acggtgcta      1200
180      cgacacctgt gactctcact actccattca gtataacatc ctctgtgtcg tctgagacta      1260
181      tgtcaaaccc agtcacagtg gcagctgcaa tgagcatgag aagtcacgta aatgtttcaa      1320
182      gtgcagttaa cataaccagc ccaatgaaca tagggcatcc tgtaactata accagtcact      1380
183      tatccatgac ctctccttta acactcacta cccagtcгаа cctccccacc cccgtcactg      1440
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185      tgacattagc cgccctctc aatatagcaa tgagacctgt agagagcatg cctttcttgc      1560
186      cccaagcttt gcctacatca ccgccttggt aaacagtatt ataaaaatcaa aatatgggta      1620
187      aaagtaaaaa tttaccagca acttaacttt tagttgatta aagcaaaaag taaccatga      1680
188      aattgggaga ttttattaca ttagttaata agagtgtggt agcatttttc tccaatttgg      1740
189      ctgggattat tcaaagtagg gtgtgtatgt aacttatcac tggaccactt tagtttaatc      1800
190      agaaattcct tttagctgac aacattgctt aaacaggata gtagttggca agatgaaatg      1860
191      ccagaattaa aaccaatcat aagtagaac cacttcaaaa taaaaaaaca gcattactat      1920
192      ttctaattccc aaggaatcac tttattgtaa acactagcag aactcttctc cctatacaag      1980
193      gtggatggct gattttaacc tgaaatttta aatccacaga ttgagagcta gtgtagaatt      2040
194      gtctgtgttt attgttttta tgagtaaaata catgcattgt cataataaaa tgcatttcag      2100
195      agaatatgca ttttaccttt gggaatatgt taatttcagg cagcattccc tatgggaaag      2160
196      gtgataccag ctctgatatg caaagcatat gataatttat cactctaaact tcaacgtata      2220
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198      gaatatagca ttgtagttga cttttt
200 <210> SEQ ID NO: 4
201 <211> LENGTH: 516
202 <212> TYPE: PRT
203 <213> ORGANISM: Homo sapiens
204 <400> SEQUENCE: 4
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207      His His Gln Gln Gln Ala Ala Gln Asn Ser Leu Leu Pro Leu Leu Ser
208           20             25             30
209      Ser Ala Val Glu Pro Pro Asp Gln Lys Pro Leu Leu Pro Ile Pro Ile
210           35             40             45
211      Thr Gln Lys Pro Gln Gly Ala Pro Glu Thr Leu Lys Asp Ala Ile Gly
212           50             55             60
213      Ile Lys Lys Glu Lys Pro Lys Thr Ser Phe Val Cys Thr Tyr Cys Ser
214           65             70             75             80
215      Lys Ala Phe Arg Asp Ser Tyr His Leu Arg Arg His Glu Ser Cys His
216           85             90             95
217      Thr Gly Ile Lys Leu Val Ser Arg Pro Lys Lys Thr Pro Thr Thr Val
218           100            105            110
219      Val Pro Leu Ile Ser Thr Ile Ala Gly Asp Ser Ser Arg Thr Ser Leu
220           115            120            125
221      Val Ser Thr Ile Ala Gly Ile Leu Ser Thr Val Thr Thr Ser Ser Ser
222           130            135            140
223      Gly Thr Asn Pro Ser Ser Ala Ser Thr Thr Ala Met Pro Val Thr
224           145            150            155            160
225      Gln Ser Val Lys Lys Pro Ser Lys Pro Val Lys Lys Asn His Ala Cys
226           165            170            175
227      Glu Met Cys Gly Lys Ala Phe Arg Asp Val Tyr His Leu Asn Arg His
228           180            185            190
229      Lys Leu Ser His Ser Asp Glu Lys Pro Phe Glu Cys Pro Ile Cys Asn
230           195            200            205
231      Gln Arg Phe Lys Arg Lys Asp Arg Met Thr Tyr His Val Arg Ser His
232           210            215            220
233      Glu Gly Gly Ile Thr Lys Pro Tyr Thr Cys Ser Val Cys Gly Lys Gly
234           225            230            235            240
235      Phe Ser Arg Pro Asp His Leu Ser Cys His Val Lys His Val His Ser
236           245            250            255
237      Thr Glu Arg Pro Phe Lys Cys Gln Thr Cys Thr Ala Ala Phe Ala Thr
238           260            265            270
239      Lys Asp Arg Leu Arg Thr His Met Val Arg His Glu Gly Lys Val Ser
240           275            280            285
241      Cys Asn Ile Cys Gly Lys Leu Leu Ser Ala Ala Tyr Ile Thr Ser His
242           290            295            300
243      Leu Lys Thr His Gly Gln Ser Gln Ser Ile Asn Cys Asn Thr Cys Lys
244           305            310            315            320
245      Gln Gly Ile Ser Lys Thr Cys Met Ser Glu Glu Thr Ser Asn Gln Lys
246           325            330            335
247      Gln Gln Gln Gln Gln Gln Gln Gln Gln Gln Gln Gln His Val Thr

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